DERWENT-ACC-NO: 2001-482954

DERWENT-WEEK: 200515

TITLE: Resilient tire, for vehicles, includes reinforced annular band with elastomeric shear layer disposed radially inward of tread portion

INVENTOR: CRON, S M; DEMINO, K W ; RHYNE, T B

PATENT-ASSIGNEE: MICHELIN RECH & TECH SA[MICL] , CRON S M[CRONI], DEMINO K W[DEMII], RHYNE T B[RHYNI]

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PATENT-FAMILY:

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RU 2246407 C2	February 20, 2005	N/A	000	B60C 009/18
WO 200142033 A1	June 14, 2001	E	037	B60C 017/00
AU 200031185 A	June 18, 2001	N/A	000	B60C 017/00
BR 9917576 A	August 6, 2002	N/A	000	B60C 017/00
US 20020124929 A1	September 12, 2002	N/A	000	B29D 030/32
EP 1242254 A1	September 25, 2002	E	000	B60C 017/00
KR 2002060995 A	July 19, 2002	N/A	000	B60C 017/00
JP 2003516264 W	May 13, 2003	N/A	044	B60C 007/00
CN 1398228 A	February 19, 2003	N/A	000	B60C 017/00
MX 2002005774 A1	January 1, 2003	N/A	000	B60C 017/00
US 6769465 B2	August 3, 2004	N/A	000	B60C 007/00
AU 777023 B2	September 30, 2004	N/A	000	B60C 017/00

DESIGNATED-STATES: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
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RU 2246407C2	N/A	1999WO-US29366	December 10, 1999
RU 2246407C2	N/A	2002RU-0118608	December 10, 1999
RU 2246407C2	Based on	WO 200142033	N/A
WO 200142033A1	N/A	1999WO-US29366	December 10, 1999
AU 200031185A	N/A	1999WO-US29366	December 10, 1999
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AU 200031185A	Based on	WO 200142033	N/A
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EP 1242254A1	N/A	1999EP-0965221	December 10, 1999
EP 1242254A1	N/A	1999WO-US29366	December 10, 1999
EP 1242254A1	Based on	WO 200142033	N/A
KR2002060995A	N/A	1999WO-US29366	December 10, 1999
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US 6769465B2	Cont of	1999WO-US29366
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ABSTRACTED-PUB-NO: US20020124929A

BASIC-ABSTRACT:

NOVELTY - A resilient tire includes a reinforced annular band disposed radially inward of the tread portion. The band comprises an elastomeric shear layer, at least a first membrane adhered to the radially inward extent of the elastomeric shear layer, and at least a second membrane adhered to the radially outward extent of the elastomeric shear layer.

DETAILED DESCRIPTION - A resilient tire, comprises a ground contacting tread portion (110), sidewall portions (150) extending radially inward from the tread portion and anchored in bead portions (160) adapted to remain secure to a wheel during rolling of the tire. A reinforced annular band is disposed radially

inward of the tread portion. It comprises an elastomeric shear layer (120), at least a first membrane (130) adhered to the radially inward extent of the elastomeric shear layer, and at least a second membrane (140) adhered to the radially outward extent of the elastomeric shear layer. Each membrane has a longitudinal tensile modulus greater than the shear modulus of the shear layer such that deforming the ground contacting tread portion by an externally applied load from a circular shape to a flat shape maintains a constant length of the membranes and relative displacement of the membranes occurs by shear in the shear layer.

An INDEPENDENT CLAIM is also included for a method of making the inventive tire.

USE - For vehicles.

ADVANTAGE - The resilient tire supports its load solely through the structural properties of its tread, sidewall and bead portions, and without support from internal air pressure. The tread portion of the tire, when viewed without the sidewall and bead portion, appears as a reinforced annular band. The band has rigidities to resist bending in both the tire meridian and equatorial planes.

DESCRIPTION OF DRAWING(S) - The figure is a cross section of the inventive tire.

Tread portion 110

Groove 115

Elastomeric shear layer 120

Membranes 130, 140

Sidewall portions 150

Bead portions 160

ABSTRACTED-PUB-NO: WO 200142033A

EQUIVALENT-ABSTRACTS:

NOVELTY - A resilient tire includes a reinforced annular band disposed radially inward of the tread portion. The band comprises an elastomeric shear layer, at least a first membrane adhered to the radially inward extent of the elastomeric shear layer, and at least a second membrane adhered to the radially outward extent of the elastomeric shear layer.

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Tread portion 110

Groove 115

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Membranes 130, 140

Sidewall portions 150

Bead portions 160

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: RESILIENT VEHICLE REINFORCED ANNULAR BAND ELASTOMER SHEAR LAYER
DISPOSABLE RADIAL INWARD TREAD PORTION

DERWENT-CLASS: A95 Q11

CPI-CODES: A11-B17; A12-T01B;

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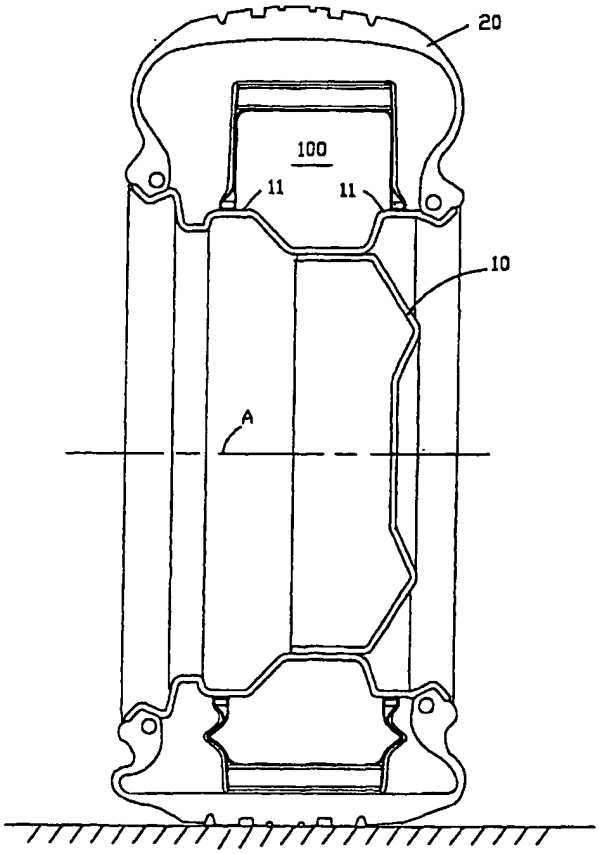
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

[Continued on next page]

(54) Title: RUNFLAT INSERT FOR TIRES AND MATERIALS THEREFOR



(57) Abstract: The present invention is a runflat insert comprising: a) an elastomeric outer contacting portion for contacting the interior surface of the tire during deflated operation of the tire, b) a reinforced annular band disposed radially inward of the outer contacting portion, where the band comprises an elastomeric shear layer, at least a first membrane adhered to the radially inward extent of the elastomeric shear layer and at least a second membrane adhered to the radially outward extent of the elastomeric shear layer, c) at least one sidewall portion extending radially inward from the contacting portion for connecting the annular band to a base member fitted around the wheel rim for securing said insert to the rim, and d) at least one carcass layer adhered to the annular band, and the carcass extending radially inward from said annular band and anchored in the base member; where the shear layer comprises an elastomeric composition that includes a metal salt of a carboxylic acid.

WO 03/008210 A1

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	69	(tire$1 or tyre$1)[clm] and shear$5[clm]	US-PGPUB	OR	OFF	2005/12/23 09:51